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ABSTRACT

Data from the 1986 Current Population Survey (CPS) and a 1987 survey of public and private enterprises in Orangeburg, South Carolina, provide the basis for estimating a salary schedule for lead teachers in Orangeburg School District 5. The underlying rationale for the development of lead teacher positions is described in terms of salary gaps between experienced teachers and other college graduates with similar attributes. Regression analysis is used to predict the earnings that lead teachers with given attributes (e.g., age, race, sex, schooling, and experience) would be expected to earn in nonteaching positions, and a salary schedule is developed for lead teachers with a minimum of 5 years of teaching experience and a master's degree. The proposed 1988-89 salary schedule for persons with a master's degree ranges from $34,500 to $41,300 (and higher salaries for teachers with more schooling), compared to the actual 1987-88 schedule in the district for teachers' with a Master's degree, ranging from $22,820 to $28,498. The proposed salary schedule allows teachers to earn as much as (and in some cases even more than) some of the principals or administrators, reducing the incentives of outstanding teachers to seek either administrative positions in the school system or jobs outside the school system. (Author)

ESTIMATING A COMPETITIVE SALARY SCHEDULE FOR LEAD TEACHERS IN A LOCAL SCHOOL DISTRICT FROM SURVEY DATA*

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ABSTRACT

Data from the 1986 Current Population Survey (CPS) and a 1987 survey of public and private enterprises in Orangeburg, South Carolina (OSCS) provide the basis for estimating a salary schedule for lead teachers in Orangeburg School district 5. The underlying rationale for the development of lead teacher positions is described in terms of salary gaps between experienced teachers and other college graduates with similar attributes. Regression analysis is used to predict the earnings that lead teachers with given attributes (e.g., age, race, sex, schooling, and experience) would be expected to earn in nonteaching positions, and a salary schedule is developed for lead teachers with a minimum of 5 years of teaching experience and a Master's degree. The proposed 1988-89 salary schedule for persons with a Master's degree ranges from $34,500 to $41,300 (and higher salaries for teachers with more schooling), compared to the actual 1987-88 schedule in the district for teachers with a Master's degree, ranging from $22,820 to $28,498. The proposed salary schedule allows teachers to earn as much as (and in some cases even more than) some of the principals or administrators, reducing the incentives of outstanding teachers to seek either administrative positions in the school system or jobs outside the school system.

INTRODUCTION

A number of national commissions[1] and numerous writers and commentators[2] have noted severe problems in attracting and retaining high-quality teachers. The lure of higher wages in administrative positions within the public school system or jobs outside the school system has turned teachers and potential teachers away from the teaching profession. Although substantial improvements have recently been made in teachers' salaries,[3] increasing interest in education as a college major,[4] the fact remains that education attracts, on the average, the least able college students,[5] and that qualified high-school teachers, especially in mathematics and sciences, are difficult to attract and retain.[6]

The practice of rewarding teachers in accordance with a fixed salary schedule, where salaries are a function of schooling and experience and nothing else, was adopted almost universally more than 50 years ago because it was felt that salary determination was too much affected by favoritism and nepotism, and that salary inequity created severe morale problems. As Kershaw and McKean observed already in 1962, adoption of a unitary salary schedule which was "a step forward in its time,"[7] also created shortages in those teaching positions where opportunity costs were high, and vice versa for surpluses. Attracting high-quality personnel to teaching would require consideration of wage and salary levels in other positions for which teachers might be qualified.

As Benson points out,[8] although starting salaries of teachers may be similar to what other college graduates expect to earn, a gap between salaries of nonteachers and teachers is created as age and experience rise. The reason for this gap is the link that is normally placed between starting and maximum salaries, the latter "seldom exceeding [the former] by a factor of more than two."[9] These observations are confirmed in a more recent study by Bird et al.,[10]

employing March 1983 CPS data for 12 southeastern states, demonstrating that the gap between the earnings of nonteachers and teachers was almost nil at age 21, but rapidly increased with age to nearly $16,000 for the age group 61 and older. And despite the increments in most teacher salary schedules for additional training, the gap is shown by Bird et al. to increase with increased training. They conclude that "unless education policy makers ascribe to extremely high estimates of the value of the net nonpecuniary benefits of the teaching occupation (job security, working conditions, etc.), the task of making teacher salaries comparable to and competitive with the nonteaching earning opportunities ... will require a significant commitment of additional resources to teacher pay.[11]

Although studies have not found a substantial defection by teachers to nonteaching jobs,[12] it has been shown that the salary gap to which we alluded is significantly associated with teacher attrition.[13] Further, Murnane and Olsen found that attrition is especially serious for secondary school teachers specializing in science and mathematics. Moreover, as Benson points out, "successful teaching leads, not to expanded opportunities ... in the activity of classroom teaching, but to the single opportunity of giving it up and not doing it any more."[14] The best teachers frequently move up into administrative positions, giving added meaning to the frequently heard assertion that "administrators are persons who 'have proven themselves too good to be just teachers'."[15]

One solution to this problem would be to increase teachers' salaries across the board, especially for more experienced teachers. While this might reduce the gap between nonteaching and teaching salaries, such a policy would still treat all teachers alike, and would not encourage the best teachers to retain

their teaching positions. Alternative suggestions include a "career ladder" for teachers, where qualified teachers may advance through a number of ranks, similar to the professorial ranking systems in higher education. In fact, career ladder systems have been instituted, among others, in Tennessee and Florida, although the Florida system has been abandoned, whereas part of the career-ladder system in Tennessee may be dropped.[16] A number of states have fully or partially implemented some form of a teacher-incentive program,[17] but the average additional compensation paid to participating teachers does not even approach the salary gaps discussed earlier.

In an effort to professionalize the teaching profession and to make it attractive to high-ability individuals pursuing a career, the Carnegie Forum and the National Governor's Association have called for the development of a lead-teacher cadre. Lead teachers would continue their classroom activities, though at a reduced level. Instead, they will be charged with innovative curriculum development, apprentice training for new teachers, and close liaison with students, parents and teachers. A lead teacher would be both a teacher and a manager. To be a lead teacher one would have to be an experienced teacher, generally with a Master's degree or higher, and possess other attributes necessary for the job. Although only a few teachers in each school will thus be designated, able and ambitious young entrants to the teaching profession can include the position of a lead teacher in their career goals, stimulating the entry of able college graduates into the teaching profession.

To attract high-caliber individuals to the lead-teaching position, a commensurate pay structure must be established. A methodology designed to develop such a salary schedule is described in the next section. The methodology is then applied to a local school district in South Carolina, employing CPS data

and results of a survey in Orangeburg, S.C. The paper closes with some concluding comments.

METHODOLOGY

We begin with an earnings function for college-educated workers who are not classroom teachers. Following Mincer,[18] we postulate a log-linear earnings function as shown in Eqn. (1):

$$\ln W = Xb + e \qquad (1)$$

where W is the wage or salary, X is a vector of relevant variables, b is a vector of coefficients, and e is an error term. A list of relevant variables might include age, sex, race, labor-market experience, schooling, occupation, employment sector, and other socio-economic and demographic variables. Most of these variables have been studied extensively in the literature, and no rationale is required here for their inclusion in the earnings function.

The next step is to estimate Eqn (1) using one or more data sources, thereby obtaining an estimated coefficient vector $\hat{b}$. Estimated lnW would therefore be given as in Eqn (2):

$$\hat{\ln W} = X\hat{b} \qquad (2)$$

To obtain estimates of salaries that lead teachers might enjoy in the labor market, we substitute in the vector X relevant characteristics that are typical of lead teachers. For instance, lead teachers are expected to be managers, so we assign to the "occupation" variable a management status. Further, we can estimate $\hat{\ln W}$ for various schooling-experience combinations, providing a $\hat{\ln W}$ schedule that is cross-classified by training and years of experience. Finally, the exponential of $\hat{\ln W}$ (that is, $e^{[\hat{\ln W}]}$) is calculated in order that $\hat{\ln W}$ may be translated into $\hat{W}$.

DATA

Suppose that we wish to apply the methodology described above to a local school district A. The application would require data on nonteacher college graduates employed in positions that require some managerial responsibilities, as well as data on teachers who are likely to be candidates for the lead-teacher positions. If district A is located in a fairly large metropolitan area, then it might be relatively easy, given sufficient resources, to conduct a survey among private and public enterprises, from which the relevant data on nonteachers might be obtained. If school district A is located in a rural or a small urban area, however, sufficient data on nonteachers might be difficult to collect. To the extent, however, that the district is located near a larger metropolitan area, or within what Fox and Kumar called a Functional Economic Area,[19] so that teachers in District A might be able, if they wished, to obtain nonteaching jobs in that area, the universe from which nonteachers might be sampled could be broadened. Furthermore, one might argue that some relatively small states or even regions might be construed as a labor market area relevant for the present analysis, hence more aggregative labor-market data might be pertinent. Moreover, more aggregative data are far less expensive to obtain, since the Current Population and other surveys offer such data on public-use tapes, rendering special surveys unnecessary.

Since our application is concerned with Orangeburg School District 5 in South Carolina, the employment of both local and more aggregative surveys appear reasonable. Two data sources have been utilized to develop salary schedules for lead teachers. The first data set is the March 1986 CPS for three southeastern states (NC, SC, and GA), including 560 observations of college educated non-teaching workers. The three states were selected because there were

too few observations for South Carolina alone. The data set includes the variables defined in Table 1. Additional data were obtained from the South Carolina Department of Education (SEDS) which provided detailed information, by school district, on such variables as teachers' age, experience, training, demographic characteristics, and salaries, providing a basis for the substitution of lead teacher characteristics into the **X** vector.

--Table 1 here--

The second data source is a survey conducted by one of the authors in Orangeburg, S.C. toward the end of 1987. As may be surmised from the survey instrument (see Appendix), data were sought from private business firms and state and local government agencies concerning salaries and fringe benefits of individuals who hold positions with responsibilities at least somewhat similar to those expected of lead teachers. 35 usable questionnaires were returned, 23 percent from state agencies, 40 percent from local government agencies, and the remainder (27 percent) from private firms. The average age of the respondents was 41 years, ranging from 25 to 56. The sample was divided almost evenly between the sexes (51.4 percent males), and almost one-half of the respondents completed only a Bachelor's degree. Among those completing post-graduate studies, 4 were in the BA+ category, 7 in the MA group, 5 in the MA+ class, and 4 had the doctoral degree. All respondents had at least some prior professional experience, with number of years of experience in area of expertise and in present position averaging 13 and 7 years, respectively. Some descriptive statistics are displayed in Table 2.

--Table 2 here--

REGRESSION RESULTS

CPS SAMPLE

The regression model for the CPS sample is given in Eqn. (3):

WAGE = f(MGMT, PROF, SALES, GOVT, GENDER, ETHNIC,
RURAL, WEEKS, HOURS, AGE, AGESQ, EDUC) (3)

where WAGE is annual earnings of workers, and AGESQ = $(AGE)^2$. We experimented with different specifications of the earnings function, and found that a linear model provided the best fit. The results are displayed in Table 3.

--Table 3 here--

Results shown in Table 3 suggest the following: (1) Other things equal, college graduates working in a managerial capacity earned in 1986 $134 more than those in a sales occupation, at least $2,886 more than those in professional occupations (we say "at least," because the coefficient of PROF is not significant at the 5% level), and $5,779 more than those in other occupations. (2) government employees earned about $2,000 less than others, ceteris paribus, though the coefficient is not statistically significant at the 5% level. (3) Males earned $8,542 per year more than females, other things equal. (4) Ethnicity had a large effect on earnings, confirming results produced, among others, by Carliner and Raymond and Sesnowitz.[20] (5) People living in non-SMSA areas earned much less. (6) An additional week of work was worth $1,337 (other things equal), and an additional hour per week added $315 to annual income (which is equivalent to $6.30 per hour per week for workers who are on the job for 50 weeks per year). (7) A parabolic relation between age and earnings, demonstrated in numerous other studies, is shown here, too. (8) Finally, each additional year of schooling beyond the Bachelor's degree was worth $1,584, other things equal.

The model employed for the Orangeburg sample is patterned after Eqn. (1)

above and is presented in Eqn. (4):

$$\ln SALARY = f(STATE, SEX, AGE, AGESQ, EXP, EXPSQ, EDUC) \quad (4)$$

where $EXPSQ = (EXP)^2$. A log-linear model was assumed, following the Mincer (1974) tradition. Results are shown in Table 4.

--Table 4 here--

The results reported in Table 4 suggest that, other things equal, nonteaching college graduates in the Orangeburg area had lower earnings in 1987 if they were females or if they worked for the state government, and earned a premium of 7.6 percent for each additional year of school completed beyond the Bachelor (equal to $2,339 at the average level of SALARY in the sample). The parabolic relation between AGE and SALARY is also observed here, though neither the coefficient of AGE nor the coefficient of AGESQ is significant at the 5% level. The experience variables are also not significant, perhaps because of the high correlation between AGE and EXP.

LEAD TEACHERS' SALARY SCHEDULES

The regression equations, along with other data, permit calculation of teacher salary schedules. Although the procedure used for the CPS regressions was somewhat different from that used for the Orangeburg survey, the basic idea is very much the same.

PROCEDURE FOR THE CPS DATA

Before a linear variant of Eqn. (2) can be calculated, it is necessary to determine values of the various variables that are relevant to lead teachers, and to estimate years of experience from the AGE variable. We assigned 1 to MGMT and 0 to PROF and SALES. We further assigned the mean values to all of the other variables except AGE, AGESQ, EDUC and GOVT. Using BEDS data, we converted AGE into years of experience as follows: First, it was assumed that age 27 is

the effective minimum age at which one might become a lead teacher. Second, the BEDS data suggest that there is a 2-year difference between age-implied experience and actual work experience, so a further downward adjustment of two years was made to correctly calibrate the experience range of the salary scale with the age linked estimate of earnings opportunities in management occupations. Further, educational preparation was converted to years of education (EDUC) in the following manner:

Educational Preparation	EDUC
Masters degree	17.5
MA + 30 hours	18.5
Doctorate	19.0

Finally, a salary schedule was estimated on the basis of the assumption that the appropriate competitive group is nongovernment workers (GOVT =0). The salary schedule is shown in Table 5. The figures in the table would be reduced uniformly by $2,103 if government workers (i.e., GOVT = 1) were used instead.

--Table 5 here--

Notice that the "experience" level 0 represents a person 27 years of age, already with considerable teaching experience. Also, we recommend that general classroom teaching experience prior to promotion to lead teacher be credited and converted in some way toward entry at higher steps on the lead teacher scale. Finally, it is noteworthy that lead teachers subject to such a salary schedule would be able to command salaries substantially higher than those that were in force at Orangeburg School District 5. For example, the top of the scale in 1987-88 was $28,498, $30,021, and $34,134, respectively, for teachers with masters degrees, masters plus 30 hours, and doctorate. Moreover, the top salaries in Table 5 are highly competitive with salaries of principals in

Orangeburg (reducing the incentive to seek administrative positions), faculty members in institutions of higher education, and nonteachers employed in the public sector (reducing teacher incentives to seek positions outside of the public school system).

PROCEDURE FOR THE ORANGEBURG SURVEY DATA

An eight-step procedure was employed, as follows:

1) Estimates are provided for state employees (set STATE = 1) and other employees (set STATE = 0).

2) Salaries are estimated for the mean value of SEX (which is 0.514).

3) Salaries are estimated for 5 different values of EXP (5, 10, 15, 20, and 25). Since EXP is, on the average, 6 years lower than total years of experience in one's expertise, the rough equivalents of total years of experience, respectively, would be 11, 16, 21, 26, and 31.

4) For each value of EXP and EDUC, a corresponding level of AGE is estimated, using a regression equation of the form:

$$AGE = a + b\,(EXP) + c\,(EDUC) + e, \qquad (5)$$

where a, b, and c are scalars to be estimated through a multiple-regression analysis, and e is an error term. The estimated equation is as follows:

$$\underset{\quad\ (0.37)\ \ (3.00)\qquad\ \ (2.09)}{AGE = 5.30 + 0.74\,(EXP) + 1.73\,(EDUC)} \qquad (6)$$

$R^2 = 0.34$, $F = 7.87$ (significant at 1% level)

where the numbers in parentheses are t-ratios. The results indicate that both EXP and EDUC are significant determinants of AGE, and that, together, they explain 34 percent in the variance of AGE.

5) Employing the results of Equation 6, AGE and AGESQ are calculated for relevant values of EXP and EDUC.

6) Using the calculated values of the various variables, as shown in steps 1 - 5, it is now possible to predict ln (SALARY) from the following equation, based on the results shown in Table 4:

Predicted ln(SALARY) = 7.49 - 0.25 (STATE) - 0.229 (0.514)
+ 0.068 (AGE) - 0.0006 (AGESQ) - 0.02 (EXP)
+ 0.0015 (EXP2SQ) + 0.076 (EDUC).

7) The natural logs in the preceding step are converted into antilogs: Predicted salary = $e^{\text{predicted ln(salary)}}$.

8) Predicted salary is adjusted by a factor of 4.23 percent, to reflect the annual growth in the region of nominal salaries of college-educated workers during the past 4 years. No adjustment was made to account for the 11-month work commitment of teachers. If desired, data in Table 6 could be adjusted by a factor of 11/12, a reduction of 8.33 percent.

A salary schedule based on the above procedure, employing the Orangeburg survey data, is presented in Table 6.

--Table 6 here--

A SYNTHETIC SALARY SCHEDULE

The salary schedule provided in Table 6 has limited applicability, especially because of the limited variability in the sample. For example, none of the state employees had a doctorate degree, and the maximum number of years of experience in present position (EXP) was 19. Extrapolations beyond the scope of the sample data are made with a large error, and therefore it is difficult to generalize from the survey results. Nevertheless, the survey results may be

used along with the results provided in Table 5 to arrive at a synthesis. A proposed salary schedule, employing such a synthesis, is provided in Table 7.

--Table 7 here--

The recommended salary schedule provides incentives for teachers to complete higher levels of education, and rewards for additional experience, at least up to some point. The recommended salaries are, moreover, sufficiently high to induce teachers to seek a position of leadership without necessarily having to select a non-teaching, administrative job, or, for holders of the doctorate, to seek a position in a college or a university. Further adjustments may be made to reflect variables that are not included in this study.

CONCLUDING COMMENTS

Although the Orangeburg survey was helpful in identifying levels of salary associated with positions of responsibility, the recommended salary schedule in Table 7 is generally lower than the predicted salary schedule shown in Table 6. Selection of the lower schedule was based on the observation that the highest salary in the Orangeburg survey was $56,000, far below some of the figures suggested in Table 6, and also because the data in Table 6 are extrapolated from values of the variables that are outside the range of the sample data. Combining the results of Table 6 with those of Table 5 provides a synthesis that appears to be a sensible and practicable salary schedule for lead teacher in Orangeburg School District 5.

A few caveats might be noted. First, although the regression and simulation procedures employed here account for some of the differences between teachers and nonteachers, it is possible that a self-selection bias may still be present.[21] Second, the present analysis is incomplete, since neither pecuniary nor nonpecuniary fringe benefits are examined. Third, as in all

empirical analyses, this work is constrained by the nature of the models employed and the data that were obtained. Different models or alternative data sources might lead to alternative results. Finally, as Benson so cogently mentions,[22] the creation of an elite core of lead teachers might create morale problems not only among other teachers who are not selected for the positions but also among parents whose children are taught by "inferior" teachers (but this is a problem even without a lead-teacher core, because some teachers are always regarded as better than others).

It is therefore advisable that administrators use common sense in developing salary schedules, avoiding both too high and too low salary schedules for lead teachers. More importantly, it is quite possible, indeed highly probable, that salary schedules based on only two variables (experience and training) may not be appropriate, and that direct measures of productivity might be necessary to reward productive teachers. But a lead-teacher salary schedule might be a small step in the right direction.

FOOTNOTES

1. See, for example, Carnegie Forum on Education and the Economy, A Nation Prepared: Teachers for the 21st Century, Task Force on Teaching as a Profession (New York: Carnegie Corporation, 1986), and National Governors' Association, Time for Results: The Governors' 1991 Report on Education (1986).

2. See, for example, Charles S. Benson, The Economics of Public Education, 3rd ed. (Boston: Houghton Mifflin, 1978), and Richard J. Murnane and Randall J. Olsen, "Will There be Enough Teachers?" American Economic Review, Papers and Proceedings of the American Economic Association, 79 (May 1989): 242-246.

3. Elchanan Cohn and Terry G. Geske, The Economics of Education, 3rd ed. (Oxford: Pergamon Press, 1990 [in press]).

4. See "Prospective Teachers," Education Digest 54 (1) (1988): 73.

5. See Carnegie Forum, op. cit.

6. Murnane and Olsen, op. cit., and Elchanan Cohn and C.G. Williams, "Labor Market Effects of Proposed Retirement Options for Teachers in South Carolina, in Teaching in South Carolina: A Retirement Initiative, pp. 32-44 (Columbia, S.C.: Educational Policy Center, University of South Carolina, 1989).

7. J.A. Kershaw and Roland N. McKean, Teacher Shortages and Salary Schedules (New York: McGraw-Hill, 1962).

8. Benson, op. cit.

9. ibid., p. 241.

10. Ronald Bird, Barnett Berry, Stratford Douglas, and Steven Sciscento, The Dynamics of the Teacher Labor Market in the Southeast (Research Triangle Park, N.C.: Southeastern Regional Council for Educational Improvement, 1985).

11. Ibid., p. 109.

12. Bird et al., op. cit, Murnane and Olsen, op. cit., and Bill D. Rickman, and Carl D. Parker, "Alternative Wages and Teacher Mobility: A Human Capital Approach," Economics of Education Review 9 (1) (1990), in press.

13. Rickman and Parker, op. cit., and William H. Baugh and Joe A. Stone, "Mobility and Wage Equilibration in the Educator Labor Market," Economics of Education Review 2 (3) (1982): 253-274.

14. Benson, op. cit., p. 242.

15. Ibid.

16. See N. Mathis, "Florida Incentive-pay Experiment Dies Quitely," Education Week 7 (June 22, 1988): 11, and R. Rothman, "Proportion of Colege Freshmen Interested in a Career in Teaching Up, Survey Finds," Education Week 7 (17) (1988): 5.

17. L. Cornett, More Pay for Teachers and Administrators Who Do More: Incentive Pay Programs, 1987 (Atlanta: Southern Regional Board, Career Ladder Clearinghouse, 1987).

18. Jacob Mincer, Schooling, Experience, and Earnings (New York: Columbia University Press, for the National Bureau of Economic Research, 1974).

19. Karl A. Fox and T. Krishna Kumar, "The Functional Economic Area: Delineation and Implication for Economic Analysis and Policy, The Regional Science Association Papers 15 (1965): 57-85.

20. G. Carliner, "Returns to Education for Blacks, Anglos, and Five Spanish Groups," Journal of Human Resources 11 (Spring 1976)): 172-184, and Richard D. Raymond and M.L. Sesnowitz, "The Rate of Return to Mexican Americans and Anglos on an Investment in a College Education," Economic Inquiry 21 (3) (1983): 400-411.

21. Charles F. Manski, "Anatomy of the Selection Problem," Journal of Human Resources 24 (3) (1989): 343-360.

22. Benson, op. cit.

Table 1. Variables in the CPS (March 1986) Data Set

VARIABLE	DEFINITION
MGMT	= 1 if managerial occupation; = 0 otherwise.
PROF	= 1 if professional occupation; = 0 otherwise.
SALES	= 1 if sales occupation; = 0 otherwise.
GOVT	= 1 if employed by a government; = 0 otherwise.
GENDER	= 1 if male; = 0 if female.
ETHNIC	= 1 if black; = 0 otherwise.
RURAL	= 1 if outside an SMSA; = 0 otherwise.
WEEKS	Number of weeks worked per year.
HOURS	Number of hours worked per week.
AGE	Age in years.
EDUC	Number of years of school completed.

TABLE 2. Descriptive Statistics of Orangeburg Survey Data

Variable	Mean	St. Dev.	Minimum	Maximum
SALARY	30,780.54	9,876.52	15,600	51,498
SEX[a]	0.51	.56	0	1
EDUC[b]	17.40	1.4.	16	20
AGE	40.82	8.16	25	56
STATE[c]	0.23	0.43	0	1
EXP[d]	7.14	4.82	1	19

[a] male = 1, female = 0.

[b] BA = 16, BA+ = 17, MA = 18, MA+ = 19, Doctorate = 20.

[c] STATE = 1 if worker is employed in a state job, otherwise STATE = 0.

[d] Total years of experience in present position.

TABLE 3. Linear Regression Coefficients for Annual Earnings of Nonteaching College-Educated Workers (WAGE): CPS, 1986, GA, NC, and SC

Variable	Regression	T-Statistic
MGMT	5779.06	3.07
PROF	2893.27	1.52
SALES	5645.45	2.41
GOVT	-2025.84	-1.32
GENDER	-8542.32	-5.36
ETHNIC	-6702.75	-2.71
RURAL	-6546.13	-4.18
WEEKS	1336.92	3.42
HOURS	315.10	3.54
AGE	1398.03	2.88
AGESQ	-11.14	-1.94
EDUC	1583.63	1.95

R^2 = 0.32, N = 560, SEE = 15,911.18

Intercept = -114,434

TABLE 4. Regression Coefficients for ln(SALARY) Model: Orangeburg Survey Data (1987)

Variable	Regression Coefficient	T-Ratio
Intercept	7.4891	5.23[a]
STATE	-0.2502	-2.09[a]
SEX	-0.2290	-2.07[a]
AGE	0.0679	1.16
AGESQ	-0.0006	-0.91
EXP	-0.0199	-0.59
EXPSQ	0.0015	0.84
EDUC	0.0756	1.65[b]

R^2 = 0.48, F = 3.36 (significant at the 1 percent level)

N = 35

[a]Statistically significant at the 5 percent level or better, two-tailed test.

[b]Statistically significant at the 5.6 percent level, one-tailed test.

TABLE 5. 1988-89 Salary Schedule for Lead Teachers, Employing CPS data (1986)

Experience In Lead Teacher Position	Educational Preparation		
	MA	MA + 30	Doctorate
0	$27,727	$29,371	$30,193
5	$31,814	$33,458	$34,280
10	$35,324	$36,968	$37,790
15	$38,260	$39,903	$40,725
20	$40,618	$42,262	$43,084
25	$42,401	$44,045	$44,867
30	$43,608	$45,251	$46,073
35	$44,238	$45,882	$46,704

Table 6. Salary Schedule for Lead Teachers, 1988-89, based on Orangeburg Survey Data

Years Of Experience In Present Position	Level Of Education					
	Masters		Masters Plus		Doctorate	
	Non-State	State	Non-State	State	Non-State	State
5	$33,650	$26,201	$37,319	$29,058	$41,232	$32,104
10	36,022	28,048	39,627	30,855	43,428	33,814
15	40,850	31,807	44,575	34,707	48,455	37,729
20	49,073	38,209	53,114	41,357	57,272	44,594
25	67,046	52,204	62,449	48,624	71,709	55,835

TABLE 7. Recommended Salary Schedule For Lead Teachers, 1988-89, Based on a Synthesis of the CPS and the Orangeburg Survey

Total Years Of Professional Experience	Corresponding Age	Level Of Education		
		Masters	Masters Plus	Doctorate
10	32	$33,000	$35,000	$38,000
15	37	36,000	38,500	41,500
20	42	39,5[illegible]	42,500	45,500
25	47	42,500	45,000	48,000
30	52	44,000	46,500	49,500

APPENDIX

UNIVERSITY OF SOUTH CAROLINA
EDUCATIONAL POLICY CENTER

BUSINESS SURVEY OF PROFESSIONALS FOR ORANGEBURG 5 LEAD-TEACHER PROJECT

POSITION/TITLE: _____

RESPONSIBILITIES OF THIS INDIVIDUAL: _____

_____

NUMBERS OF PROFESSIONALS SUPERVISED BY THIS INDIVIDUAL: _____

NUMBERS OF OTHER EMPLOYEES SUPERVISED BY THIS INDIVIDUAL: _____

INCOME: Basic Annual Salary $_____

Bonuses (average annual) $_____

FRINGE BENEFITS: (please indicate whether particular benefits are offered, and, if possible, their monetary value to the employee):

Benefit	Check if Offered	Dollar Value (per annum)
Health insurance	_____	_____
Life insurance	_____	_____
Dental insurance	_____	_____
Sick leave	_____	_____
Maternity leave	_____	_____
Profit sharing	_____	_____
Paid vacation	_____	_____
Use of company car	_____	_____
Free or discounted products	_____	_____
Professional development	_____	_____
Other (specify)_____	_____	_____

PERSONAL DATA FOR THIS INDIVIDUAL:

Age_____ Sex (male____ female____)

Education (BA___ BA+___ Masters___ Masters+___ Ph.D.___)

Experience:

Total years of experience in area of expertise_____
Total years of experience in present position _____
Total years of experience in this organization_____

WOULD YOU BE WILLING TO ANSWER A FEW FOLLOW-UP QUESTIONS (VIA TELEPHONE) REGARDING THIS SURVEY? Yes_____ No_____

COMPANY NAME